

IN THE CLAIMS

Please cancel Claims 2, 12, 19-20, and 24-49.

~~Please amend the claims as follows:~~

1. (Currently Amended) A method of producing a powder by a continuous reduction reaction, wherein said powder is a refractory metal powder, a valve metal powder, a refractory metal alloy powder, a valve metal alloy, a refractory metal suboxide powder, or a valve metal suboxide powder, comprising:

- a) providing a refractory or valve metal oxide as a continuous feed or segments of continuous feed;
 - b) contacting said refractory or valve metal oxide feed with a reducing agent selected from the group consisting of magnesium, aluminum, and calcium, to create a static mixture or a dynamically formed mixture;
 - c) reducing said refractory or valve metal oxide feed in a reaction zone by heating said mixture in a reaction vessel to create a highly exothermic self-sustaining reaction, said exothermic reaction being triggered by heating said mixture to an ignition temperature and/or by adding a further reagent or catalyst; and
 - d) recovering a high surface area powder substantially free of impurities.
2. (Currently Cancelled)
3. (Original) The method of claim 1 wherein said reducing agent is in solid form in said mixture.
4. (Original) The method of claim 1 wherein said refractory or valve metal oxide feed is in solid form in said mixture.
5. (Original) The method of claim 1 wherein said mixture is formed prior to being fed into said reaction zone.
6. (Original) The method of claim 1 wherein said mixture is formed within said reaction zone.
7. (Original) The method of claim 1 wherein said reaction vessel is a vertical tube furnace.

8. (Currently Amended) The method of claim 1 wherein said refractory or valve metal oxide feed is selected from the group consisting of tantalum pentoxide, niobium pentoxide, niobium suboxide, ~~zirconium dioxide~~, tungsten trioxide, chromium trioxide, molybdenum trioxide, titanium dioxide, vanadium

pentoxide and niobium oxide, mixtures of at least one of the foregoing and zirconium dioxide, or and mixtures thereof.

9. (Currently Amended) The method of claim 1 wherein said refractory metal powder, said valve metal powder, said refractory metal alloy powder, or said valve metal alloy powder selected from the group consisting of ~~consists essentially of~~ tantalum, niobium, molybdenum, tungsten, vanadium, chromium, titanium, and or combinations thereof.

10. (Original) The method of claim 1 wherein said refractory metal suboxide powder or valve metal suboxide powder is selected from the group consisting of niobium suboxide, tungsten suboxide, molybdenum suboxide, vanadium suboxide, titanium suboxide, and chromium suboxide.

11. (Currently Amended) The method of claim 1 wherein the temperature in said reaction zone [vessel] is less than or equal to the melting point of said refractory or valve metal oxide feed.

12. (Currently Cancelled).

13. (Original) The method of claim 1 wherein said powder further comprises agglomerates, said agglomerates having a substantially uniform particle size distribution.

14. (Original) The method of claim 1 wherein said powder further comprises agglomerates, said agglomerates having a bimodal particle size distribution.

15. (Original) The method of claim 1 further comprising adjusting at least one process parameter to control the chemical and physical properties of said powder, wherein said process parameter is selected from the group consisting of reagent feed rates, ignition temperature, steady state energy supply, reagent particle size, reducing agent stoichiometry, and inert carrier gas flow rate.

16. (Original) The method of claim 1 wherein said reducing agent in said mixture is provided in an amount substantially equal to the stoichiometric quantity required to react with said refractory or valve metal oxide feed.

17. (Original) The method of claim 1 further comprising forming said powder into pellets at an appropriate sintering temperature.

18. (Original) The method of claim 17 further comprising forming said sintered pellets into electrolytic capacitors.

19-20 (Currently Cancelled).

21. (Original) The method of claim 1 wherein the recovering step (d) further comprises agglomerating and/or deoxidizing.

22. (Original) The method of claim 21 further comprising forming said powder into pellets at an appropriate sintering temperature.

23. (Original) The method of claim 22 further comprising forming said sintered pellets into electrolytic capacitors.

24-49 (Currently Cancelled).

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